

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of :

Thibaut MONTANARI et al. :

Serial No.: Not Yet Assigned : Group Art Unit: Not Yet Assigned

Filed: January 28, 2002 : Examiner: Not Yet Assigned

For: **POLYAMIDE-BASED TRANSPARENT COMPOSITION**

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, DC 20231

Sir:

Prior to examination, please amend the above-identified application and consider the remarks as follows:

IN THE CLAIMS:

Please **amend** the claims as follows:

1. (Amended) A transparent composition comprising, by weight, the total being 100%:

5 to 40% of an amorphous polyamide(B) which results from the condensation either of at least one diamine, of at least one diacid,
or of a cycloaliphatic α,ω -aminocarboxylic acid,
or of a combination of these two possibilities, and

and optionally of at least one monomer chosen from a α,ω -aminocarboxylic acid or the corresponding lactam, a aliphatic diacid , and a aliphatic diamine,

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0 to 40% of a supple polyamide (C) chosen from copolymers containing polyamide blocks, polyether blocks, and copolyamides,

0 to 20% of a compatabilizer (D) for (A) and (B),

0 to 40% of a supple modifier (M),

with the condition that (C) + (D) + (M) is between 0 and 50%,

the remainder to 100% being a semi-crystalline polyamide (A).

2. (Amended) The composition according to claim 1, wherein (A) is derived from the condensation of a lactam containing at least 9 carbon atoms, an α - ω -aminocarboxylic acid containing at least 9 carbon atoms or a diamine and a diacid wherein the diamine or the diacid contains at least 9 carbon atoms.

3. (Amended) The composition according to claim 1, wherein (A) is PA-11 or PA-12.

4. (Amended) The composition according to claim 1, wherein (A) is an equilibrated polyamide.

5. (Amended) The composition according to claim 23, wherein the cycloaliphatic diamine of the amorphous polyamide (B) is isophoronediamine.

6. (Amended) The composition according to claim 1, comprising (C) and wherein (C) is a copolymer containing polyamide blocks and polyether blocks.

7. (Amended) The composition according to claim 6, wherein the polyamide blocks are PA-6 or PA-12 blocks and the polyether blocks are polytetramethylene glycol (PTMG) blocks.

8. (Amended) The composition according to claim 1 comprising (C) and wherein (C) is a copolyamide.

9. (Amended) The composition according to claim 1, wherein (A) is PA-12 and (D) is PA-11.

10. (Amended) The composition according to claim 1, comprising (D) and wherein (D) is a catalysed polyamide.

11. (Amended) The composition according to claim 1, wherein (A) is PA-12 and (D) is catalysed PA-11.

12. (Amended) The composition according to claim 1, wherein the supple modifier (M) comprises a ethylene-polypropylene (EPR) copolymer, a EPDM copolymer grafted with maleic anhydride, or a ethylene/alkyl (meth) acrylate/maleic anhydride copolymer.

13. (Amended) The composition according to claim 1, wherein the proportions of the constituents are :

- the difference to 100% of (A),
- 20 to 30% of (B),
- 0 to 40% of (C),
- 0 to 20% of (D),
- 0 to 40% of (M),
- (C) + (D) + (M) being between 0 and 50%.

14. (Amended) The composition according to claim 1, wherein the proportions of the constituents are:

- the difference to 100% of (A),
- 5 to 40% of (B),
- 0 to 30% of (C),
- 0 to 20% of (D),

0 to 30% of (M),
(C) + (D) + (M) being between 0 and 30%.

15. (Amended) The composition according to claim 1, wherein the proportions of the constituents are:

the difference to 100% of (A),
10 to 30% of (B),
0 to 30% of (C),
0 to 20% of (D),
0 to 30% of (M),
(C) + (D) + (M) being between 0 and 30%.

16. (Amended) The composition according to claim 1, wherein the proportions of the constituents are:

the difference of 100% of (A),
20 to 30% of (B),
0 to 30% of (C),
0 to 20% of (D),
0 to 30% of (M),
(C) + (D) + (M) being between 0 and 30%.

17. (Amended) The composition according to claim 1, wherein the proportions of the constituents are:

the difference to 100% of (A),]
10 to 30% of (B),
0 to 20% of (C),
0 to 20% of (D),
0 to 20% of (M),

(C) + (D) + (M) being between 0 and 20%.

18. (Amended) The composition according to claim 1, wherein the proportions of the constituents are:

the difference to 100% of (A),

10 to 30% of (B),

0 to 15% of (C),

0 to 15% of (D),

0 to 15% of (M),

(C) + (D) + (M) being between 0 to 15%.

19. (Amended) The composition according to claim 1, wherein the proportions of the constituents are:

the difference to 100% of (A),

20 to 30% of (B),

0 to 20% of (C),

0 to 20% of (D),

0 to 20% of (M),

(C) + (D) + (M) being between 0 and 20%.

20. (Amended) The composition according to claim 1, wherein the proportions of the constituents are:

the difference to 100% of (A),

2 to 30% of (B),

0 to 15% of (C),

0 to 15% of (D),

0 to 15% of (M),

(C) + (D) + (M) being 0 and 15%.

21. (Amended) An article produced by injecting molding a composition according to claim 1.

22. (Amended) The article according to claim 21, wherein said article is decorated by sublimation, and coated with a transparent protective layer.

Please **add** the following new claims:

23. The composition according to claim 1, wherein said amorphous polyamide (B) comprises an aliphatic or cycloaliphatic diamine.

24. The composition according to claim 1, wherein said amorphous polyamide (B) comprises an aliphatic or cycloaliphatic diacid.

25. The composition according to claim 1, wherein said amorphous polyamide (B) comprises at least one monomer chosen from a α , ω -aminocarboxylic acid, a aliphatic diacid and a aliphatic diamine.

26. The composition according to claim 1, wherein said semi-crystalline polyamide (A) comprises para-aminodicyclohexylmethane-12.

27. The composition according to claim 1, wherein (B) is condensed from at least one monomer chosen from a α,ω -aminocarboxylic acid and said α,ω -aminocarboxylic acid comprises 7-aminoheptanoic acid, 11-aminoundecanoic acid or 12-aminododecanoic acid.

28. The composition according to claim 2, wherein said lactam comprises caprolactam, oenantholactum or lauryllactam.

29. The composition according to claim 23, wherein said aliphatic diamine comprises hexamethylenediamine, dodecamethylenediamine or trimethylhexamethylenediamine.

30. The composition according to claim 1, wherein said semi-crystalline polyamide (A) is an aliphatic polyamide selected from: polycaprolactam (PA-6), polyundecanamide (PA-11), polyauryllactam (PA-12), polybutylenedipamide (PA-4,6), polyhexamethylenedipamide (PA-6,6), polyhexamethyleneazelaamide (PA-6,9), polyhexamethylenesebacamide (PA-6,10), polyhexamethylenedodecanamide (PA-6,12), polydecamethylenedodecanamide (PA-10,12), polydecamethylenesebacanamide (PA-10,10), and polydodeexamethylenedodecanamide (PA-12,12).

31. The composition according to claim 30, wherein said (A) comprises a blend of aliphatic polyamides.

32. The composition according to claim 23, wherein said cycloaliphatic diamine comprises at least one isomer of: bis(4-aminocyclohexyl)methane (BACM), bis(3-methyl-4-aminocyclohexyl)methane (BACM) and 2-2-bis(3-methyl-4-aminocyclohexyl)propane(BMACP).

33. The composition according to claim 1, comprising the supple polyamide (C).

34. The composition according to claim 1, wherein said supple polymide (C) comprises a copolyamide which results from the condensation of at least one α,ω -aminocarboxylic acid, at least one diamine and at least one dicarboxylic acid.


35. The supple polyamide (C) according to claim 33, wherein said supple polyamide (C) comprises polyamide blocks which have a number-average molar mass between 300 and 15000.
36. The supple polyamide (C) according to claim 33, wherein said supple polyamide (C) comprises polyether blocks which have a number-average molar mass between 100 and 6000.
37. The composition according to claim 1, comprising said compatabilizer (D) allowing a reduction in the temperature required to make the blend of (A) and (B) transparent.
38. The composition according to claim 37, wherein said compatabilizer (D) is a catalyzed aliphatic polyamide.
39. The composition according to claim 1, comprising a supple modifier (M) wherein (M) comprises a functionalized polyolefin, a grafted aliphatic polyester, a copolymer containing polyether blocks and polyamide blocks, a copolymer of ethylene, an alkyl (meth) acrylate or a saturated vinylcarboxylic acid ester.
40. The composition according to claim 39, wherein said functionalized polyolefin comprises α -olefin units, epoxy units, carboxylic acid units, or carboxylic anhydride units.
41. The supple modifier (M) according to claim 33, wherein said (M) does not reduce the transparency of a composition.

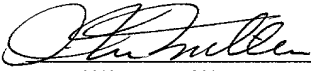
42. The composition according to claim 1 prepared by melt-blending.
43. An article comprising the composition according to claim 1.
44. The article according to claim 43, selected from a tube, a plate, a film or a profile.
45. The composition according to claim 1 comprising a stabilizer, an antioxidant or a UV stabilizer.

REMARKS

The principal purpose of this Preliminary Amendment is to eliminate multiply dependent claims and the fee associated therewith. Applicants reserve the right to reintroduce claims to cancelled subject matter.

Respectfully submitted,


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K/ATOCM/246/PrelAmendment 1-25-02

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In The Claims:

Please amend the claims as follows:

1. (Amended) A transparent ~~Transparent~~ composition comprising, by weight, the total being 100%:

5 to 40% of an amorphous polyamide(B) which results ~~essentially~~ from the condensation:

either of at least one diamine, ~~chosen from cycloaliphatic diamines and aliphatic diamines~~
and of at least one diacid.

or of a cycloaliphatic α,ω -aminocarboxylic acid,

or of a combination of these two possibilities, and

optionally of at least one monomer chosen from a α, ω -aminocarboxylic acids ~~acid~~ or the possible corresponding lactam, a aliphatic ~~diacids~~ diacid and a aliphatic ~~diamines~~ diamine,

0 to 40% of a ~~supple~~ polyamide (C) chosen from copolymers containing polyamide blocks, ~~and~~ polyether blocks, and copolyamides,

0 to 20% of a compatabilizer (D) for (A) and (B),

0 to 40% of a ~~supple~~ modifier (M),

with the condition that (C) + (D) + (M) is between 0 and 50%,

the remainder to 100% being a semi-crystalline polyamide (A).

2. (Amended) The composition ~~Composition~~ according to Claim 1, wherein ~~in which~~ (A) is derived from the condensation of a lactam containing at least 9 carbon atoms, an α,ω -aminocarboxylic acid containing at least 9 carbon atoms or a diamine and a diacid wherein ~~such that~~ the diamine or the diacid contains ~~contain~~ at least 9 carbon atoms.

3. (Amended) The composition ~~Composition~~ according to Claim 1 ~~or 2~~, wherein ~~in which~~ (A) is PA-11 or PA-12.

4. (Amended) The composition ~~Composition~~ according to ~~any one of the preceding claims~~ claim 1, wherein ~~in which~~ (A) is an equilibrated polyamide.
5. (Amended) The composition ~~Composition~~ according to ~~any one of the preceding claims~~ claim 23, in which ~~wherein~~ the cycloaliphatic diamine of the amorphous polyamide (B) is isophoronediamine.
6. (Amended) The composition ~~Composition~~ according to ~~any one of the preceding claims~~ claim 1, in which comprising (C) and wherein (C) is a copolymer containing polyamide blocks and polyether blocks.
7. (Amended) The composition ~~Composition~~ according to Claim 6, wherein ~~in which~~ the ~~copolymer containing polyamide blocks and polyether blocks consists of~~ are PA-6 or PA-12 blocks and the polyether blocks ~~PTMG are polytetramethylene glycol (PTMG) blocks.~~
8. (Amended) The composition ~~Composition~~ according to ~~any one of Claims~~ Claim 1 to 5 ~~comprising (C) and wherein, in which~~ (C) is a copolyamide.
9. (Amended) The composition ~~Composition~~ according to ~~any one of the preceding claims~~ Claim 1, wherein ~~in which~~ (A) is PA-12 and (D) is PA-11.
10. (Amended) The composition ~~Composition~~ according to ~~any one of the preceding claims~~ Claim 1, comprising (D) and wherein ~~in which the compatibilizer (D) is a catalysed polyamide.~~
11. (Amended) The composition ~~Composition~~ according to ~~any one of the preceding claims~~ Claim 1, wherein ~~in which~~ (A) is PA-12 and (D) is catalysed PA-11.
12. (Amended) The composition ~~Composition~~ according to ~~any one of the preceding claims~~ Claim 1, wherein ~~in which~~ the supple modifier (M) ~~is chosen from~~ comprises a ethylene-

polypropylene (EPR) ~~copolymers~~ copolymer, a EPDM ~~copolymers~~ copolymer grafted with maleic anhydride, or a ethylene/alkyl (meth) acrylate/maleic anhydride copolymer ~~copolymers~~ the latter ~~copolymers mixed with copolymers of ethylene and of an alkyl (meth) acrylate.~~

13. (Amended) The composition ~~Composition~~ according to Claim 1, wherein ~~any one of Claims 1 to 12, in which~~ the proportions of the constituents are:

~~as follows (the total being 100%):~~

- the difference to 100% of (A),
- 20 to 30% of (B),
- 0 to 40% of (C),
- 0 to 20% of (D),
- 0 to 40% of (M),
- (C) + (D) + (M) being between 0 and 50%.

14. (Amended) The composition ~~Composition~~ according to ~~any one of Claims~~ Claim 1 to 12, ~~in which~~ wherein the proportions of the constituents are ~~as follows (the total being 100%):~~

- the difference to 100% of (A),
- 5 to 40% of (B),
- 0 to 30% of (C),
- 0 to 20% of (D),
- 0 to 30% of (M),
- (C) + (D) + (M) being between 0 and 30%.

15. (Amended) The composition ~~Composition~~ according to ~~any one of Claims~~ Claim 1 to 12, wherein ~~in which~~ the proportions of the constituents are ~~as follows (the total being 100%):~~

- the difference to 100% of (A),
- 10 to 30% of (B),
- 0 to 30% of (C),
- 0 to 20% of (D),

0 to 30% of (M),
(C) + (D) + (M) being between 0 and 30%.

16. (Amended) The composition ~~Composition~~ according to any one of Claims Claim 1 to 12,
~~in which wherein~~ the proportions of the constituents are as follows ~~(the total being 100%)~~:

the difference of 100% of (A),
20 to 30% of (B),
0 to 30% of (C),
0 to 20% of (D),
0 to 30% of (M),
(C) + (D) + (M) being between 0 and 30%.

17. (Amended) The composition ~~Composition~~ according to any one of Claims Claim 1 to 12,
~~in which wherein~~ the proportions of the constituents are as follows ~~(the total being 100%)~~:

the difference to 100% of (A),]
10 to 30% of (B),
0 to 20% of (C),
0 to 20% of (D),
0 to 20% of (M),
(C) + (D) + (M) being between 0 and 20%.

18. (Amended) The composition ~~Composition~~ according to any one of Claims Claim 1 to 12,
~~in which wherein~~ the proportions of the constituents are as follows ~~(the total being 100%)~~:

the difference to 100% of (A),
10 to 30% of (B),
0 to 15% of (C),
0 to 15% of (D),
0 to 15% of (M),
(C) + (D) + (M) being between 0 to 15%.

19. (Amended) The composition ~~Composition~~ according to ~~any one of Claims Claim~~ 1 to 12, ~~in which wherein~~ the proportions of the constituents are as follows (the total being 100%):

the difference to 100% of (A),
20 to 30% of (B),
0 to 20% of (C),
0 to 20% of (D),
0 to 20% of (M),
(C) + (D) + (M) being between 0 and 20%.

20. (Amended) The composition ~~Composition~~ according to ~~any one of Claims Claim~~ 1 to 12, ~~in which wherein~~ the proportions of the constituents are as follows (the total being 100%):

the difference to 100% of (A),
2 to 30% of (B),
0 to 15% of (C),
0 to 15% of (D),
0 to 15% of (M),
(C) +(D) + (M) being 0 and 15%.

21. (Amended) An article ~~Articles consisting of a composition according to any one of the preceding claims, such as plates, films, sheets, tubes or profiles, the articles obtained produced by injecting molding moulding and in particular the films and sheets which are then bonded to skis a composition according to claim 1.~~

22. (Amended) The article ~~Articles~~ according to Claim 21, wherein said article is ~~which are~~ decorated, ~~for example~~ by sublimation, and coated with a transparent protective layer consisting of the composition according to any one of Clams 1 to 20.